


PERFORMING A PEDIATRIC ORAL HEALTH INSPECTION: LESSONS FOR SCHOOL NURSES


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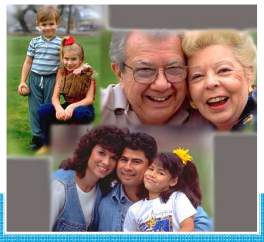
ORAL HEALTH

The prevention and treatment of oral disease and injury as well as the maintenance of health.



Burt and Ecklund. Dentistry, Dental Practice and the Community. Sixth ed. Elsevier Saunders St. Louis, Missouri 2005

ORAL HEALTH

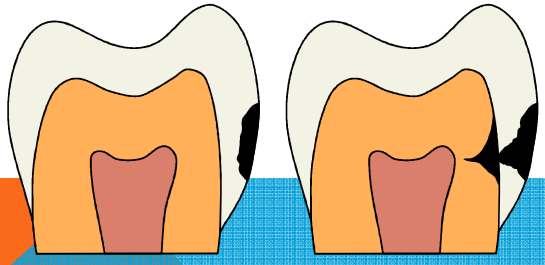
Americans made about 500 million visits to dentists, and an estimated $98.6 billion was spent on dental services.


Source: ADA 2007

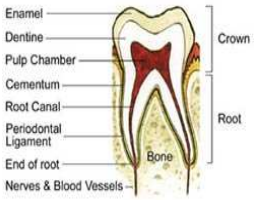
TOOTH DECAY (CARIES)

Non-Cavitated

Cavitated

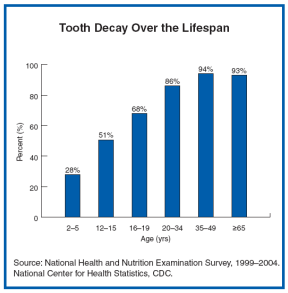


TOOTH DECAY (CARIES)

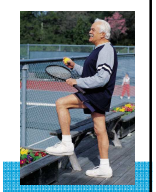


Dental caries is an infectious, transmissible disease in which bacterial by-products (i.e., acids) dissolve the hard surfaces of teeth. Dental caries can result in loss of tooth structure, pain, and tooth loss and can progress to acute systemic infection. MMWR **August 17, 2001 / 50(RR14);1-42**

TOOTH DECAY: AS WE AGE



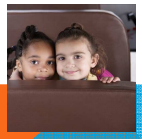
Source: National Health and Nutrition Examination Survey, 1999–2004. National Center for Health Statistics, CDC.



TOOTH DECAY: CHILDREN

*__80%__ of tooth decay is found in 25% of children.

*Asian and Pacific Islanders suffer the most tooth decay, followed by Hispanics, African-Americans and white children.



"Oral Disease: A Crisis Among Children of Poverty", a fact sheet from Children's Dental Health Project.

TOOTH DECAY

Dental caries (tooth decay) is the single most common chronic childhood disease – 5 times more common than asthma and 7 times more common than hay fever.

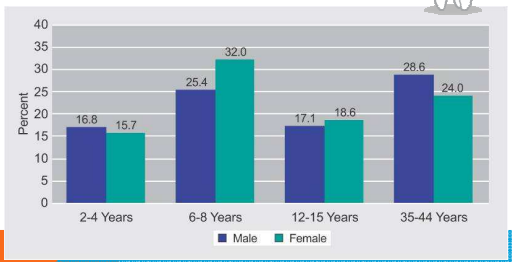

U.S. Department of Health and Human Services. (2000). Oral Health in America: A Report of the Surgeon General. National Institute of Dental Craniofacial Research, National Institutes of Health: Rockville, MD

TOOTH DECAY: CHILDREN


More than 50% of 5- to 9-year-old children have at least one cavity or filling, and that proportion increases to 78% among 17-year-olds.



UNTREATED CARIES PREVALENCE BY GENDER AND AGE GROUP



Data source: The Third National Health and Nutrition Examination Survey (NHANES III) 1988-1994, National Center for Health Statistics, Centers for Disease Control and Prevention.

Oral Health U.S., 2002. National Institute of Dental and Craniofacial Research, National Institutes of Health and the Division of Oral Health, Centers for Disease Control and Prevention.

TOOTH DECAY



***More than 51 million school hours are lost each year to dental-related illness.**

***Poor children suffer nearly 12 times more restricted-activity days than children from higher-income families.**

***Dental disease can lead to problems in eating, speaking and learning.**

U.S. Department of Health and Human Services. (2000). Oral Health in America: A Report of the Surgeon General. National Institute of Dental Craniofacial Research, National Institutes of Health. Rockville, MD

TRUE OR FALSE



No one has ever died from a toothache?

BOY DIES DUE TO DENTAL INFECTION

ORAL HEALTH IN NEBRASKA

1. Needs
2. Resources
3. Strategies

NEBRASKA POPULATION

140,538	Children	Birth – 5
325,853	Children	6 – 18
232,134	Seniors, Others	65+

NHHS, Office of Health Statistics Research and Performance Measurement, 2007

OPEN-MOUTH SURVEY

3RD GRADE SCHOOL CHILDREN 2004/2005 SCHOOL YEAR

ORAL HEALTH STATUS NEBRASKA CHILDREN

Open Mouth Survey 3rd Grade School Children
2004/2005 School Year NHHS/CDC

	Percent*	95% CI**
Caries free	40.7	36.4 – 45.0
Caries experience	59.3	55.0 – 63.6
Dental sealants	45.3	41.3 – 49.2
Untreated decay	17	13.6 – 20.4
Rampant caries (7+ teeth with caries experience)	13.2	9.8 – 16.6
Needing treatment	17.3	13.1-21.5

*Data are weighted for non-participation and non-response

**The range of values in which the true population value will be found (95% probability)

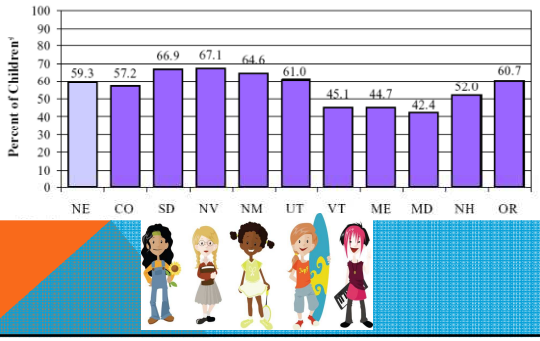
ORAL HEALTH STATUS

	Caucasian (n=1,701)		African American (n=124)		Hispanic (n=154)	
	%*	95% CI**	%*	95% CI**	%*	95% CI**
Caries free	42.9	(37.9-47.6)	33.8	(25.0-42.6)	24.6	(17.4-31.8)
Caries experience	57.2	(52.4-62.1)	66.2	(57.4-75.0)	75.4	(68.2-82.6)
Dental sealants	46.2	(41.7-50.7)	46.6	(38.4-54.8)	32.9	(25.5-42.4)
Untreated decay	14.9	(11.8-17.9)	27.1	(17.8-36.3)	29.8	(22.6-37.0)
Rampant caries	11.8	(8.5-15.1)	18.1	(11.6-24.6)	23.5	(16.2-30.9)
Needing treatment	14.9	(11.8-18.0)	28.3	(20.6-36.0)	30.9	(23.9-37.9)

*Data are weighted for non-participation and non-response

**The range of values in which the true population value will be found (95% probability)

STATEWIDE CARIES EXPERIENCE



UNTREATED DENTAL DISEASE

NE Pre-school children: 0-5 years of age

Fluoridated communities: 16%

Non-fluoridated communities: 22%

National Oral Health Conference, Scientific Abstract Presentation. Portland, Oregon, May 2, 2001

ORAL HEALTH STATUS

25% of Nebraskans aged 65 are edentulous

An additional 23% are missing 6 or more teeth

NHHS, Office of Health Statistics, Research and Performance Measurement, BRFSS 2002

ORAL HEALTH STATUS

Adults aged 65+ who have lost all of their natural teeth due to tooth decay or gum disease

1	Connecticut	12.4	14	Michigan	17.2	27	Vermont	21.3	40	Missouri	25.2
2	Utah	13.6	15	Oregon	17.8	28	New Mexico	21.8	41	South Dakota	26.1
3	California	13.8	16	Colorado	18.1	29	South Carolina	21.8	42	Indiana	27.3
4	Minnesota	14.3	17	Rhode Island	18.4	30	Wyoming	21.8	43	Kansas	27.8
5	Virgin Islands	14.7	18	Florida	18.7	31	Idaho	22.5	44	Georgia	28.3
6	Arizona	15.0	19	Illinois	18.8	32	Alaska	23.0	45	North Carolina	28.3
7	Washington	16.1	20	DC	19.4	33	Nebraska	23.1	46	Mississippi	29.6
8	Massachusetts	16.5	21	Virginia	19.4	34	Iowa	23.3	47	Oklahoma	31.2
9	Nevada	16.5	22	Montana	19.6	35	Pennsylvania	23.8	48	Louisiana	31.4
10	Maryland	16.7	23	Wisconsin	19.7	36	Maine	24.3	49	Alabama	31.9
11	Texas	16.8	24	Ohio	20.4	37	Puerto Rico	24.5	50	Tennessee	32.3
12	New York	16.9	25	New Hampshire	21.1	38	Arkansas	24.7	51	Kentucky	38.1
13	New Jersey	17.0	26	Delaware	21.2	39	North Dakota	25.0	52	West Virginia	42.9

www.cdc.gov – National Oral Health Surveillance System

NEBRASKA ORAL HEALTH NEEDS

17% of third graders have untreated caries

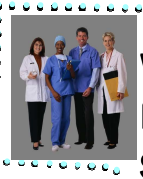
20% of preschool children have caries

25% of adults > age 65 are edentulous

ORAL HEALTH IN NEBRASKA

1. Needs
2. Resources
3. Strategies

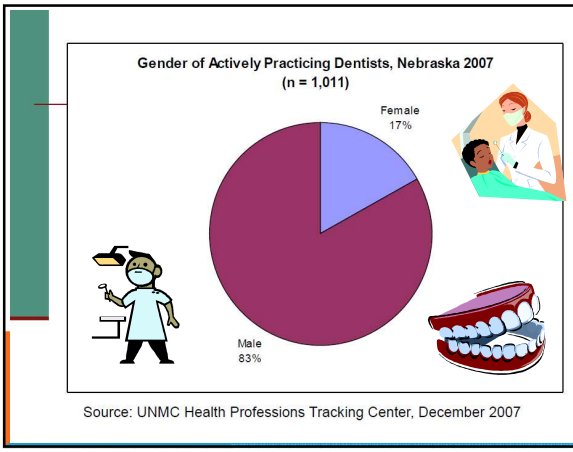
RESOURCES



Workforce

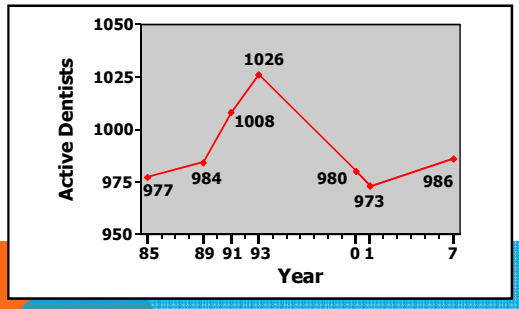
Dental spending

Safety net



Source: UNMC Health Professions Tracking Center, December 2007

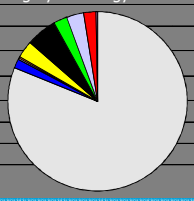
TOTAL NUMBER OF NEBRASKA ACTIVELY PRACTICING DENTISTS



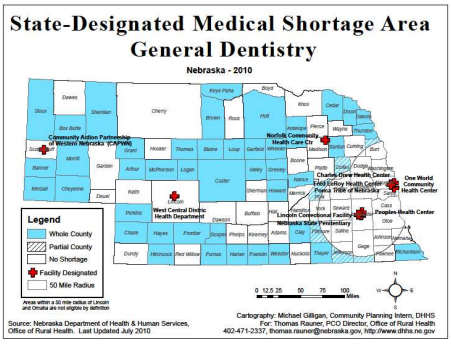
Source: UNMC Health Professions Tracking Center, Dental Survey, 2007

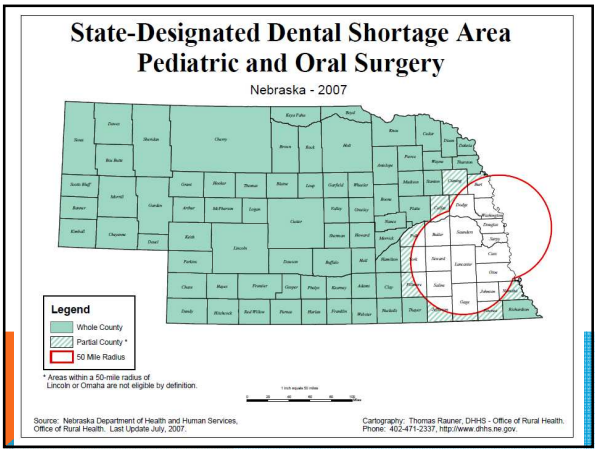
Nebraska Actively Practicing Dentists by Dental Specialty

Dental Specialty	No.	%
General	794	81.0
Endodontic	17	1.7
Oral Maxillofacial Surgery Radiology	2	0.2
Oral Pathology	4	0.4
Oral Surgery	29	3.0
Orthodontic	55	5.6
Pediatrics	24	2.4
Periodontics	30	3.1
Prosthodontic	22	2.2
Public Health	3	0.3
TOTAL	980	100



UNMC Health Professions Tracking Center, Dental Survey, 2001





NEBRASKA DENTISTS

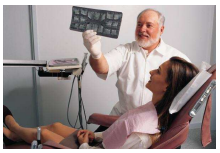
67% OF ALL NEBRASKA DENTISTS ARE UNMC GRADUATES

86% OF ALL RURAL DENTISTS ARE UNMC GRADUATES

Health Professions Tracking Center
January 23, 2007

ACCESS TO DENTAL CARE IN NEBRASKA

Visits to a dentist during the past year among those aged 18 years and older

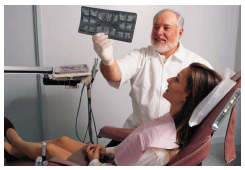


70.4 %

National Center for Chronic Disease Prevention and Health Promotion
BRFSS 2008 CDC

ACCESS TO DENTAL CARE NATIONALLY

Visits to a dentist during the past year among those aged 18 years and older



68.5%

National Center for Chronic Disease Prevention and Health Promotion
BRFSS 2008 CDC

TRUE OR FALSE

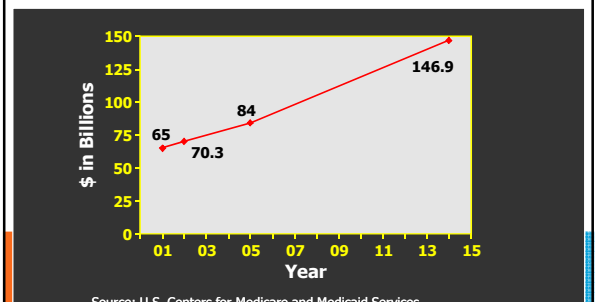
There are more dental hygienists in Nebraska than dentists?

Number of Active Dental Professionals, Nebraska 2007

Dentist(1)	1,011
Dental Hygienist(2)	1,027
Total	**2,038**

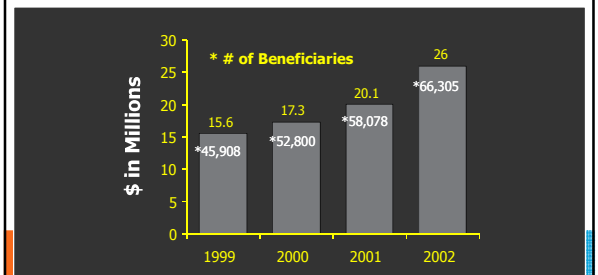
(1) All professionals tracked by the UNMC HPTC possess an active license and are actively practicing.
(2) All professionals tracked by NE DHHS possess an active license but are not necessarily practicing.

NATIONAL DENTAL SPENDING 2015



Source: U.S. Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group

NEBRASKA DENTAL MEDICAID

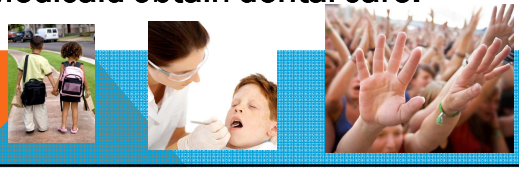


Source: U.S. Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group

RESOURCES - SPENDING

Nationally, fewer than 1 in 5 children in Medicaid obtain dental care.

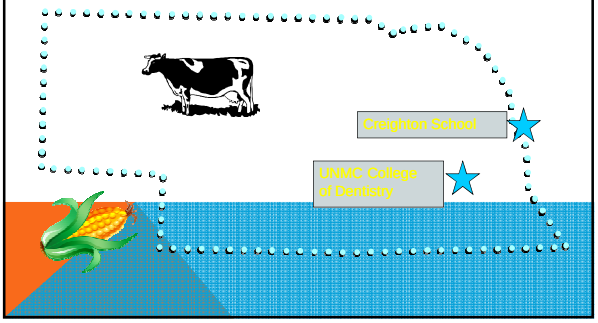
In Nebraska, about 1 in 2 children in Medicaid obtain dental care.



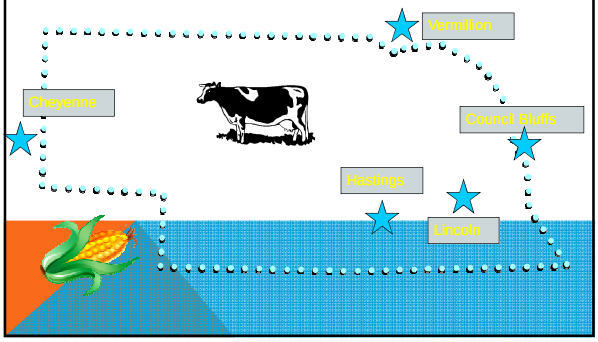
SAFETY NET DENTAL RESOURCES

- Dental Schools
- Community Health Centers
- County/District Health Depts.
- Local programs

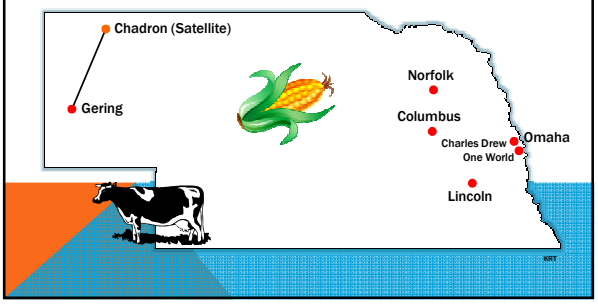
DENTAL SCHOOLS IN NEBRASKA



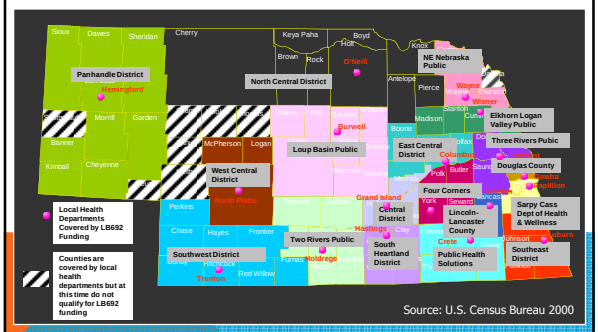
DENTAL HYGIENE SCHOOLS IN THE REGION



NEBRASKA'S FEDERALLY QUALIFIED HEALTH CENTERS (FQHC) 2011

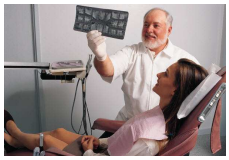


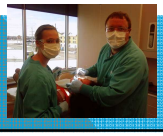
NEBRASKA LOCAL PUBLIC HEALTH DEPARTMENTS UNDER THE HEALTH CARE FUNDING ACT (LB692)



VOLUNTEER DENTISTRY

UNMC Dental Days
Give Kids a Smile-Creighton University
Nebraska Mission of Mercy (NMOM)
SONRISA
UNMC Sharing Clinic
Clinic With A Heart
School-based dental sealant programs
Fluoride varnish programs
UNMC Dental student rural health rotations





RESOURCES

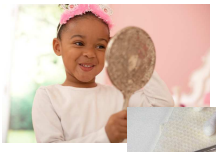
Workforce
Spending
Safety Nets

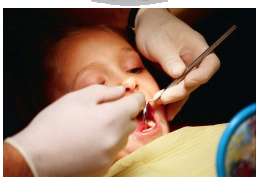
ORAL HEALTH IN NEBRASKA

1. Needs
2. Resources
3. Strategies

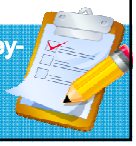
QUESTIONS

Oral Screenings





http://www.astdd.org/basic-screening-survey-tool/#children



Dental Screening


Healthy Teeth


Mild Decay


Moderate Decay


Severe Decay

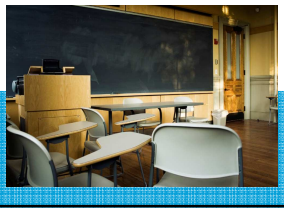
DENTAL SCREENING SUPPLIES

- Tongue depressors (to retract tongue and cheeks)
- Light source: Either a bagged flashlight or penlight (and batteries)
- Latex-free gloves
- Gauze
- Toothpicks, cotton-tipped applicators or new toothbrushes (to remove food from biting surfaces of teeth).
- Trash bags/trash can.
- Soap and water or waterless hand cleaner.
- Surface disinfectant.
- Paper towels.
- Forms for documentation
- Ink pen
- Sandwich bags or plastic wrap - to cover ink pen and hand-held light, (e.g., penlight or flashlight).

DENTAL SCREENING

Screening Table Setup

1. Paper towel(s) on top of your work table/area.
2. Hand disinfectant.
3. Latex-free gloves.
4. Gauze.
5. Tongue depressors.
6. Toothpicks, cotton-tipped applicators or toothbrushes.
7. Bagged flashlight or penlight .
8. Bagged ink pen.
9. Forms for documentation.



PRINCIPLES OF INFECTION CONTROL NO ANTICIPATED EXAMINER CONTACT
with Mucous Membranes and/or Blood and/or Saliva Contaminated with Blood

I. Take action to stay healthy

II. Avoid contact with blood
- A. Protective coverings
  1. Gloves Optional
  2. Facial protection Optional
  3. Protective clothing Optional
- B. Avoid injuries
  1. Handling sharps Not anticipated
  2. Written policy available on site

III. Limit the spread of blood
- A. Control of contamination with blood not anticipated
- B. Waste handling follow state and local regulations

IV. Make instruments and equipment safe for use
- A. Instruments Single-use tongue blade or dental mirror, disposed of promptly
- B. Covered surfaces Change coverings as necessary
- C. Uncovered surfaces Clean as necessary

Summers CJ, Gooch BF, Marianos DW, Malvitz DM, Bond WW. Practical infection control in oral health surveys and screenings. J Amer Dent Assoc 1994;125:1213-17.

Oral Health Screening Form/Preschool Children

Screen Date: __ __/__ __/__ __ __ __	Site Code:	Screener's Initials:
ID Number:	Birth Date: __ __/__ __/__ __ __ __	Age:
Gender: 1=Male 2=Female	Race/Ethnicity: 1=White 2=Black/African American 3=Hispanic/Latino 4=Asian 5=American Indian/Alaska Native 6=Native Hawaiian/Pacific Islander 7=Multi-racial 9=Unknown	
Untreated Cavities: 0=No untreated cavities 1=Untreated cavities	Caries Experience: 0=No caries experience 1=Caries experience	
Early Childhood Caries: 0=No ECC 1=ECC	Treatment Urgency: 0=No obvious problem 1=Early dental care 2=Urgent care	
Comments:		

NOTE: If you are collecting information on date of birth, age and race using a questionnaire, you can delete those fields from this form.

Basic Screening Surveys: An Approach to Monitoring Community Oral Health, ASTDD.

Parent Notification of Screening Results

Dear Parent or Guardian:

_____had an oral health screening today. The results of the screening are listed below. Since this was only a screening, **your child should still have a regular dental check-up with a dentist.** No dental x-rays were taken today. Your child's oral health screening results:

_____No obvious need for dental treatment at this time. Please see a dentist for regular dental check-ups.

_____Early dental care is needed. Please call your dentist and make an appointment soon.

_____**URGENT!** A problem has been found in your child's mouth that needs immediate attention. Please call your dentist right away.

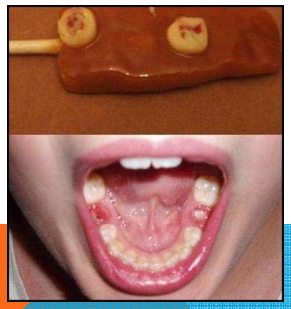
Parent Notification of Screening Results

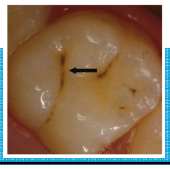
Screening Results
Child's Name_____
Dear Parent or Guardian,
Your child has received a dental screening at school today. The results of the screening indicate that: (Check all that apply)
____ Your child has no obvious dental problems.
____ Your child should be evaluated for preventive care (cleaning) or sealants.
____ Your child appears to have some dental problems and should see a dentist.
Please make an appointment at your earliest convenience so that your child can receive a complete examination. Your dentist will determine, what, if any, treatment is needed.
____ Your child appears to have an **URGENT** dental need. Please contact a dentist as soon as possible for a complete examination.
A screening is not a comprehensive clinical examination. No x-rays were taken and the **screening does not replace an in-office dental examination by your family dentist**. All children need to have regular or routine care by a dental professional.

DENTAL SCREENINGS SEEK TO MINIMIZE THE CHANCE THE WORST OUTCOME WILL OCCUR

DENTAL SCREENING

Dental Screening





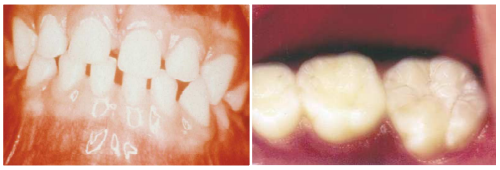
DENTAL SCREENING

Dental Screening

DENTAL SCREENING

Case A

DENTAL SCREENING



Case B

DENTAL SCREENING

Case C

QUESTIONS

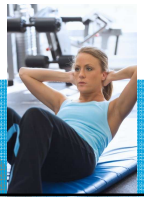
DENTAL HEALTH IN NEBRASKA

1. Needs
2. Resources
3. Strategies

HEALTH PROMOTION

Includes the integration of:

- Social
- Mental
- Emotional
- Spiritual
- Physical



HEALTH PROMOTION= EDUCATION +PREVENTION

"the process of enabling people to increase control over, and to improve their health."

World Health Organization. Ottawa Charter for Health Promotion, website: http://www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf. December 17, 2010

HEALTH EDUCATION

"Any combination of learning opportunities designed to facilitate voluntary adaptations of behavior that are conducive to health."

Burt and Ecklund. Dentistry, Dental Practice and the Community. Sixth ed. Elsevier Saunders St. Louis, Missouri 2005

HEALTH EDUCATION

Participant involvement
Compatible with culture
Science/evidence based

HEALTH EDUCATION

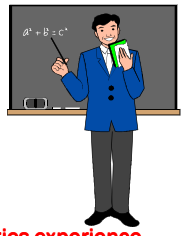
Health message interpreted through "filters"
Successful education maximizes self-involvement
Mass media effective in simple/consistent messages
Health professionals need to accept not all people share their values on health
Dental health education improves knowledge but has no direct effect on caries experience

BANDURA'S SOCIAL LEARNING THEORY:

*People learn by observing
*Learning can occur without a change in behavior
*Cognition plays a large role in learning. (Awareness and expectations of future reinforcements or punishments influence behavior)

Burt and Ecklund. Dentistry, Dental Practice and the Community. Sixth ed. Elsevier Saunders St. Louis, Missouri 2005

DENTAL HEALTH EDUCATION



Improves knowledge
Has positive but temporary effect on plaque levels
Has no discernible effect on caries experience

Kay and Locker. Is dental health education effective? A Systematic Review of Current Evidence. Community Dentistry and Oral Epidemiology 1996;24:231-5.

HEALTH PROMOTION= EDUCATION +PREVENTION

"the process of enabling people to increase control over, and to improve their health."

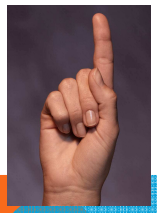
World Health Organization. Ottawa Charter for Health Promotion, website: http://www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf. December 17, 2010

CARIES PREVENTION

Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States, MMWR August 17, 2001 / 50(RR14);1-42 Centers for Disease Control and Prevention

FLUORIDE

Single most effective and efficient means of preventing dental caries regardless of age, race, or income.



Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States, MMWR August 17, 2001 / 50(RR14);1-42 Centers for Disease Control and Prevention

FLUORIDE

Water fluoridation
Fluoride toothpaste
Fluoride varnish
Fluoride rinses
Fluoride supplements

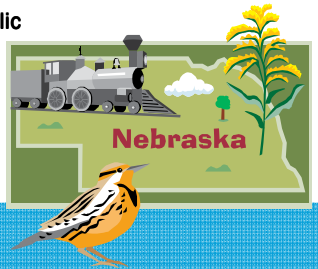
CDC FLUORIDE REPORT 2001

Fluoride works primarily after teeth have erupted, especially when small amounts are maintained constantly in the mouth, specifically in dental plaque and saliva.

Clarkson BH, Fejerskov O, Ekstrand J, Burt BA. Rational use of fluorides in caries control. In: Fejerskov O, Ekstrand J, Burt BA, eds. Fluorides in dentistry. 2nd ed. Copenhagen: Munksgaard, 1996:347–57.

WATER FLUORIDATION IN NEBRASKA

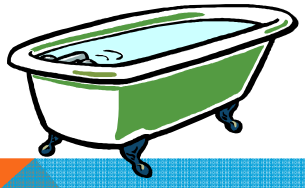
Approximately 70% of all people served by public water systems.

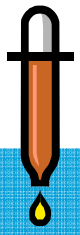


GOOGLE: My Water's Fluoride

HOW MUCH FLUORIDE IS NEEDED ?

Community water needs 0.7 parts per million





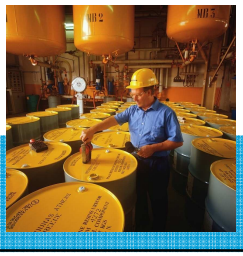
National Research Council (NRC) Report on Fluoride in Drinking Water

THREE FLUORIDE COMPOUNDS USED FOR FLUORIDATION (NATIONAL BOARDS)

Hydrofluorsilicic acid (liquid) easy to add to water

Sodium silicofluoride (solid)

Sodium fluoride (solid)



FLUORIDE INTAKE

Air: 0.04mg/day

Food and beverages:
1 to 3 mg/day in fluoridated areas, decreasing to 1.0mg/day or less in a non-fluoridated areas.

Water: For most people, water and other beverages provide 75% of fluoride intake, whether or not the drinking water is fluoridated.

CDC Morbidity and Mortality Weekly Report (MMWR) August 17, 2001 / 50(RR14);1-42

TRUE OR FALSE

The more fluoride a child receives, the better.

WATER FLUORIDATION: CARIES

Caries experience of children in a fluoridated area is 20-35% less than non-fluoridated.

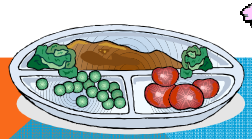
Adults – Over a lifetime, fluoridation has been estimated to reduce coronal and root caries by about 20-40%.

Seniors- experience 17-35% less root caries in fluoridated areas compared to non- fluoridated areas.

WATER FLUORIDATION: HALO EFFECT

Secondary exposure to fluoridated water in processed foods and beverages.

In some non-fluoridated areas ingestion can be significant.



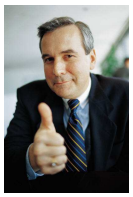
FLUORIDE EXPOSURE

Critical period for the development of fluorosis in the maxillary permanent central incisors is 22 months extends for periods up to several years after that for later developing teeth.




WATER FLUORIDATION ENDORSEMENT

American Medical Association
American Nurses Association
American Hospital Association
American Dental Association
Institute of Medicine
National Institute of Health
U.S. Department of Veterans Affairs
Center's for Disease Control and Prevention



http://www.ada.org/public/topics/fluoride/facts/compendium.asp

FLUORIDE VARNISH



Applied 2 x a year except,
for high risk populations is applied 3-4 x a year.

FLUORIDE VARNISH

Applied 2 x a year
For high risk populations is applied 3-4 x a year

Less time
Less patient discomfort
Greater patient acceptance

SELF-APPLIED FLUORIDES – PUBLIC HEALTH PROGRAMS

Individualized Gel-tray applications: to customize a tray and supervise the application of the daily fluoride, it works well, but is not cost effective.

Supervised Brushing Programs: Neutral Sodium Fluoride was used .5-1% once every 2 months



FLUORIDE EXPOSURE

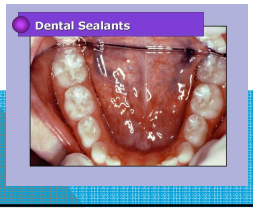
CDC recommendations:

- Frequent use of small amounts of fluoride for all ages
- Judicious use of fluoride supplements
- Parental monitoring of fluoride intake for children < 6 years
- Fluoride concentration labeling on bottled water products
- Education for health professionals and the public, as well as further research

MMWR August 17, 2001 / 50(RR14);1-42
Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States

Sealants

- Invented in 1955
- Introduced in 1967
- Marketed in 1971



Dental Sealants Retention Rates

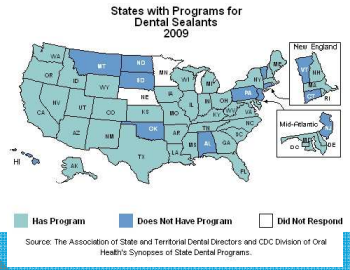
- 92-96% After 1 yr.
- 67-82% After 5 yrs.
- 50-70% After 10 yrs.

Kanellis MJ, Warren JJ, Levy SM. A comparison of sealant placement techniques and 12-month retention rates. J Public Health Dent 2000;60(1):53–56

2020 Objective

28% of 8-14 year-olds should have pit & fissure sealants on one or more permanent molar teeth

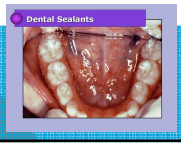
Dental Sealants:
Disease Prevention and Health Promotion



CDC National Center for Chronic Disease Prevention and Health Promotion

TRUE OR FALSE

A sealant is 100% effective in preventing caries on top of the teeth if properly placed?



Effectiveness

Sealants are 100% effective in preventing disease when properly placed.

Sealants

Pit-and-fissure sealants are underused, particularly among those at high risk of experiencing caries; that population includes children in lower-income and certain racial and ethnic groups.



Centers for Disease Control and Prevention. Oral health: Preventing cavities, gum disease, and tooth loss: 2007. www.cdc.gov/nccdphp/publications/aag/oh.htm.

Results

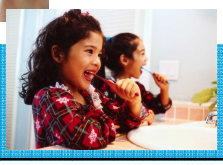

A one time dental sealant program will ↓ caries by 52% after 15 years.

Sealant Conclusions

- Excellent means to prevent decay.
- More sealants need to be provided for at risk populations.

HEALTH PROMOTION CONCLUSIONS

Although education efforts result in minimal long term effects, they are necessary.
Prevention efforts are more effective than education.
Prevention efforts should be targeted to those populations/individuals at risk.
Prevention efforts include the appropriate use of fluorides and sealants.

CONCLUSION


Oral Health Promotion and disease prevention require education and appropriate use of prevention modalities.


ORAL HEALTH IN NEBRASKA

Means bringing together

- Needs
- Resources
- Strategies